

### Appendix 1

## Implementation Schedule of Recommended Mitigation Measures



 Table A1-1
 Air Quality Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Constructi	on Phase					
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	All the dust control measures as recommended in the Air Pollution Control (Construction Dust) Regulation, where applicable, should be implemented. Typical dust control measures include:	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>Proper and regular watering should be provided for all exposed and excavated work sites.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>Open stockpiles should be avoided or covered. Where possible, prevent placing dusty material storage piles near ASRs.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>All excavated or stockpile of dusty materials should be entirely covered by impervious sheeting or sprayed with water to ensure that the entire surface is wet. They should be sprayed with water immediately prior to any loading or transfer activities. These materials should be removed, backfilled or reinstated where practicable.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>After the removal of stockpiles, the remaining dusty material should be sprayed with water and cleared from the surface of roads. Stockpiling areas of dusty materials should not be extended beyond the pedestrian barriers, fencing or traffic cones.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>At locations with proposed open excavation and reinstatement works, hoarding of not less than 2.4m from ground level should be provided along the entire length of that portion of the site</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation



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		boundary except for a site entrance or exit. The contractor should ensure that the hoardings are well maintained throughout the entire construction period.				
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>Vehicles used for the transportation of dusty materials/spoils should be covered with tarpaulin or similar material. The cover should extend over the edges of the sides and tailboards.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>Vehicle wheel washing facilities will be provided at exit of the works site. The areas where vehicle wheel washing activities are carried out and the section of the construction site between the vehicle washing facilities and the exit should be paved with concrete or bituminous materials.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>Where possible, routing of vehicles and position of construction plant should be at the maximum possible distance from ASRs.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>All demolished materials that may generate dust should be covered entirely by impervious sheeting or placed in a covered area with the top and three sides enclosed within a day of demolition.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Construction Dust) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>At construction works areas where demolition takes place, water or dust suppression chemicals should be sprayed prior to, during and immediately after the demolition activities to ensure that the top surface remains wet.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Annex 4 and Annex 12 of EIAO -TM, Air Pollution Control (Construction Dust) Regulation



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S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>The requirements stipulated in the Development Bureau Technical Circular (Works) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness should be followed as far as practicable to enhance the cleanliness and tidiness of construction sites.</li> </ul>	Air Quality (fugitive dust) Control during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Development Bureau Technical Circular (Works) No. 8/2010 Enhanced Specification for Site Cleanliness and Tidiness
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>NRMMs should be approved or exempted with a label issued by EPD. The label should be displayed at a conspicuous position of the machine or vehicle. Nonroad vehicles are required to meet the Euro V emission standards and smoke requirements as stipulated under the Air Pollution Control (Vehicle Design Standards) (Emission) Regulation.</li> </ul>	Emission from NRMM during Construction Phase	Contractor(s)	At all construction areas of the site during the entire construction period	Air Pollution Control (Non-road Mobile Machinery) (Emission) Regulation
S.3.8.1	S.3.2.3 & Table A1-1 of Appendix 1	<ul> <li>The works at overlapping section are recommended to be scheduled to avoid works at the areas near Fan Kam Road.</li> <li>The Contractor shall liaise with No. CE 61/2012 (HY) – Improvement to Fan Kam Road – Investigation contractors so as to avoid undertaking works concurrently with the works from CE 61/2012 Project when they are in the close proximity. As a conservative approach, works for drainage improvement shall be carried when the works from the No. CE 61/2012 project is over 500m away.</li> </ul>	Prevent potential cumulative construction air quality impacts	Contractor(s)	At all construction areas of the site for Ha Che during the entire construction period	-
Operationa	al Phase					
N/A	N/A	None specific	N/A	N/A	N/A	N/A

#### Table A1-2 Noise Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Construc	tion Phase					
S.4.6.6	S. 4.8.1 & Table A1-2 of Appendix 1	Use of quiet PMEs and smaller sized of PMEs as practicable.	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO –TM and NCO
S.4.6.7	S. 4.8.1 & Table A1-2 of Appendix 1	Use of quiet PME for generator, mobile crane and excavator, wheeled/tracked,	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO –TM and NCO
S.4.6.8	S. 4.8.1 & Table A1-2 of Appendix 1	The Contractor should be responsible for the design of temporary/ movable noise barriers with consideration of the size of PME and the requirements of intercepting the line of sight between the noise sensitive receivers and PME.	Noise control during construction	Contractor(s)	Construction areas near the specified locations during the construction period	EIAO –TM and NCO
S.4.7.1	S. 4.8.1 & Table A1-2 of Appendix 1	<ul> <li>The Contractor shall adopt the Code of Practice on Good Management Practice to Prevent Violation of the NCO (Cap. 400) (for Construction Industry) published by the EPD;</li> <li>The Contractor shall observe and comply with the statutory and non-statutory requirements and guidelines;</li> <li>Before commencing any work, the Contractor shall submit to the Environmental Review for approval the method of working, equipment and noise mitigation measures intended to be used at the site;</li> <li>The Contractor shall devise and execute working methods to minimise the noise impact on the identified surrounding sensitive uses, and provide experienced personnel with suitable training to</li> </ul>	Noise control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	EIAO –TM and NCO



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		<ul> <li>ensure that those methods are implemented;</li> <li>Noisy equipment and noisy activities should be located as far away from the NSR's as is practical;</li> <li>Machines and plant (such as dump truck, vibratory compactor, lorry, cranes) that may be intermitted use should be shut down between work periods or should be trottled down to a minimum. Additionally, the combined use of noisy equipment/machines should be avoided, when possible;</li> <li>Only well-maintained plant should be operated on-site and plants should be serviced regularly during the construction programme;</li> <li>Silencers, mufflers or acoustic treatment mats on construction equipment should be utilised and properly maintained during the construction duration;</li> <li>Plants known to emit noise strongly in one direction should, wherever possible, be orientated so that the noise is directed away from the nearby NSRs; and</li> <li>Material stockpiles and other structures should be effectively utilised as noise barriers, where</li> </ul>				
S.4.7.2	S. 4.8.1 & Table A1-2 of Appendix 1	practicable. The Contractor shall, from time to time, be aware of the noise impacts on the surrounding NSRs through adequate noise monitoring during the works so that adjustments can be made to the number of plants used for any construction activity and the corresponding plant positioning. These requirements shall be incorporated into the Project works contract.	Noise control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	EIAO –TM and NCO



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Operation	nal Phase					
N/A	N/A	None specific	N/A	N/A	N/A	N/A



Table A1-3	Ecological Impact – Implementation Schedule of Recommended Mitigation Measures
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EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Constructio	n Phase					
S.5.9.2	S.5.2.1	The section of watercourse with construction activities should be hydrologically isolated from the rest of the watercourse as far as practicable (except discharge of treated runoff).	Ecological – to avoid and minimize the spatial impact/disturbance to the riverine habitat	Contractor	During construction at all sites	EIA, Contractual requirements
S.5.9.2	S.5.2.1	The staged construction activities should be commenced from upstream and progresses toward the downstream area and the reinstatement work especially the planting of riparian vegetation should also be undertaken in stages and commenced as soon as the hardscape work completed in the working section	Ecological – to avoid and minimize the spatial impact and shorten the temporal disturbance to the riverine habitat	Contractor	During construction at all sites	EIA, Contractual requirements
S.5.9.3	S.5.2.2	<ul> <li>Good Site Practice</li> <li>Effective implementation of an Environmental Management Systems in accordance with the ISO 14001 for all work sites;</li> <li>Effective implementation of mitigation measures recommended for dust suppression, noise reduction, as well as water quality and waste management as detailed in other sections of this EIA report</li> <li>Effective implementation of the Tree Preservation Measures as detailed in the guidelines published by the Tree Management Office</li> <li>Staff awareness training on the ecological importance of the riverine habitats and inhabited wildlife, as well as briefing on the mitigation measures recommended in this report</li> <li>Well defined and fenced Work Area to prevent intentional or accidental encroachment or trespassing into the adjacent habitats for access, parking and operation of plants/machineries, as well</li> </ul>	Ecological – to avoid or minimize the potential disturbance to the habitats and wildlife inhabited within or adjacent to the work sites	Contractor	During construction at all sites	EIA, Contractual requirements



EIA Ref. EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
	<ul> <li>as stockpiling of construction material or waste;</li> <li>Fence off any potentially ecologically sensitive resources within the work area with warning signpost;</li> <li>Water diversion by means of submerged water pump should be avoided as far as practicable to prevent obstruction of wildlife movement along the channel</li> <li>Waste and refuse should be stored or dumped in appropriate receptacles and on-site burning of waste should be strictly prohibited;</li> <li>Excavated material should be properly covered or promptly disposed, and opportunities to stockpile and backfill the topsoil should be explored</li> <li>No chemical should be stockpiled on-site until absolutely necessary</li> <li>On-site maintenance of plant/machineries/vehicle should be avoided as far as practicable</li> <li>Silt/ Sediment/ Oil traps should be installed to avoid direct discharge of effluent or site run-off</li> <li>Regular ecological checks</li> <li>Cut down of vegetation during site clearance should be in stages before groundwork takes place as such to disperse any wildlife that is sheltering in the immediate area; and</li> <li>minimise vehicle access</li> </ul>				



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
S.5.9.4	S.5.2.10	The construction work in Tai Wo should be scheduled in the dry season and sand bags or other similar facilities should be placed along the southern boundary of the work site to prevent any accidental discharge of untreated effluent into the buffered grassland and EIS under adverse weather condition. In addition, discharge of any treated or untreated effluent, either by means of soakaway or direct discharge to nearby waterways, should be directed away from the grassland buffer and the EIS. The above measure should be audited regularly as part of the routine site inspection undertaken by the ET.	Ecological – to avoid and minimize any potential impact to the Cheung Po EIA from site discharge	Contractor	Tai Wo	EIA, Contractual requirements
S.5.9.6 to 5.9.7	S.5.2.7, 5.2.8	A detail survey to update the abundance and distribution of the endemic freshwater crabs within the project site (include the original watercourse which will be cut-off at Ha Che and Lin Fa Tei, inclusive of a receptor site search for the preparation of a "Freshwater Crab Translocation Plan", in which the whole process including logistic arrangement should be detailed for the approval of AFCD	Ecological – to avoid/minimize the direct impact to the local population of these two endemic freshwater crab species	Engineer	Lin Fa Tei and Ha Che, before the commencement of the construction work	EIA, Contractual requirements
S.5.9.6 to 5.9.7	S.5.2.9	Capture and translocate two endemic freshwater crabs and undertake post-translocation monitoring program in accordance to the approved "Freshwater Crab Translocation Plan".	Ecological – to avoid/minimize the direct impact to the local population of these two endemic freshwater crab species	Contractor, ET	Lin Fa Tei and Ha Che, within one month before the commencement of the construction work	EIA, Contractual requirements
S.5.9.6 to 5.9.8	S.5.2.9	Before the commencement of a construction work in a new section, the site should be inspected by the ecologist to confirm no inhabitation of the two freshwater crab species	Ecological – to avoid/minimize the direct impact to the local population of these two endemic freshwater crab species	Contractor, ET	Lin Fa Tei and Ha Che, within one month before the commencement of the construction work	EIA, Contractual requirements
S.5.9.9	S.5.2.4	The Aquilaria sinensis (seedling) within the site boundary at Sung Shan New Village to be protected and retained during construction in accordance with DEVB TCW No.	Ecological – to preserve the floral species of conservation concern	Engineer	Sung Shan New Village	EIA, Contractual requirements



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		4/2020 Tree preservation				
S.5.9.13- 5.9.19	S.5.2.15	Restoration of wildlife habitat by ecological habitat and niche that could promote colonisation of aquatic wildlife during the reinstatement of embankment and channel bed	Ecological – to compensate for the loss of wildlife habitat especially the two endemic freshwater crab species	Contractor	All sites during construction	EIA, Contractual requirements
Operationa	l Phase		•	•		
5.9.22	S5.3.1	<ul> <li>The following mitigation measures should be implemented during the operational phase of the Project:</li> <li>Any maintenance activities within the channel bed should be scheduled in the dry season and beyond the breeding season of the freshwater crab, which normally spawning in the wet season;</li> <li>Staff awareness training on the ecological importance of the riverine habitats and inhabited wildlife and remind the team to minimize unnecessary disturbance to the channel;</li> <li>Vegetation maintenance of the embankment should avoid trespassing into the channel bed as far as practicable, and should focus on those plant species found to be too invasive or exotic in origin;</li> <li>The use of powered equipment should be with cautions to avoid accidental spillage of oil or fuel into the water body</li> <li>If application of fungicide or pesticide is required to treat plant disease or eradicate any insect pest (such as fire ant) along the channel side or within the embankment, only ecological friendly pesticide or fungicide with no detrimental effect on the water quality or aquatic fauna should be applied</li> <li>Any dredging or desilting if required should be undertaken in dry season and section-by-section to disperse any wildlife that may be sheltering in the</li> </ul>	Ecological - to minimize the potential ecological impact associated with maintenance activities	Maintenance Contractor	All sites during Operation	Contractual requirements



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		immediate area, and vehicle access and the use of powered equipment should be minimized as far as practicable				
S.5.11.6	S.5.2.14	Monitor the establishment of the riverine habitat in accordance to the approved plan once the staged reinstatement work of the work section completed, and the monitoring of restored riverine habitat should be at least 3 years.	Ecological – monitor the recovery of the riverine system	ET	Upon completion of the staged reinstatement work at all sites	EIA, Contractual requirements

 Table A1-4
 Water Quality Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Construc	tion Phase					
S.6.7.2	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>The mitigation measures should cover, but not limited to the following Best Management Practices</li> <li>Sand/silt removal facilities such as sand traps, silt traps and sediment basins should be provided to remove sand/silt particles from runoff to meet the requirements of the Technical Memorandum standards under the WPCO. The design of silt removal facilities should be based on the guidelines provided in ProPECC PN 1/94. All drainage facilities and erosion and sediment control structures should be inspected monthly and maintained to ensure proper and efficient operation at all times and particularly during rainstorms.</li> <li>Work programmes should be designed to minimize the size of work areas to minimize the soil exposure soil and reduce the potential for increased siltation and runoff;</li> </ul>	Water Quality Control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO and ProPECC PN 1/94



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		<ul> <li>Boundaries of earthworks should be marked and surrounded by dykes or embankments for flood protection, as necessary.</li> </ul>				
		<ul> <li>Silt removal facilities, channels and manholes should be maintained and cleaned regularly to ensure the proper function;</li> </ul>				
		<ul> <li>Water pumped out from excavations should be discharged into silt removal facilities;</li> </ul>				
		<ul> <li>Careful programming of the works to minimize soil excavation during the rainy season; If excavation of soil cannot be avoided during the wet season (April to September), exposed slope surfaces should be covered by a tarpaulin or other means. Other measures that need to be implemented before, during, and after rainstorms are summarized in ProPECC PN 1/94.</li> </ul>				
		<ul> <li>Earthwork surfaces should be well compacted and the subsequent permanent work or surface protection should be carried out immediately after the final surfaces are formed;</li> </ul>				
		<ul> <li>Wastewater generated from the washing down of mixer trucks and drum mixers and similar equipment should wherever practicable be recycled. The discharge of wastewater should be kept to a minimum;</li> </ul>				
		<ul> <li>To prevent pollution from wastewater overflow, the pump sump of any water recycling system should be provided with an on-line standby pump of adequate capacity and with automatic alternating devices;</li> </ul>				
		<ul> <li>Under normal circumstances, surplus wastewater may be discharged into foul sewers after treatment in silt removal and pH adjustment facilities (to within</li> </ul>				



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		<ul> <li>the pH range of 6 to I0). Disposal of wastewater into storm drains will require more elaborate treatment. Surface run-off should be segregated from the concrete batching plant and casting yard area as much as possible, and diverted to the stormwater drainage system. Surface run-off contaminated by materials in a concrete batching plant or casting yard should be adequately treated before disposal into stormwater drains;</li> <li>Open stockpiles of construction materials on site should be covered with tarpaulin or similar fabric during rainstorms.</li> </ul>				
S.6.7.4	S.6.2.3 & Table A1-4 of Appendix 1	The guidelines stipulated in the ProPECC PN 1/94 "Construction Site Drainage" issued by the EPD should be followed to minimise the potential water quality impacts. Good housekeeping and stormwater best management practices, as detailed below, should be implemented to ensure that all construction runoff are well controlled in order to minimise the water quality impacts that arise due to the construction works of the Project.	Water Quality Control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO and ProPECC PN 1/94
		• Flood protection such as dikes or embankments should be provided around the boundaries of earthwork areas. Temporary ditches should be provided as appropriate to facilitate the runoff discharge into drainage system, through a silt/sediment trap. The silt/sediment traps should be incorporated in the permanent drainage channels to enhance deposition rates.				
		<ul> <li>Construction works should be programmed to avoid surface excavation works during the rainy seasons (April to September). All exposed earth areas should be completed and vegetated as soon as possible after earthworks have been completed. If</li> </ul>				



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		excavation of soil cannot be avoided during the rainy season, or at any time of year when rainstorms are likely, exposed slope surfaces should be covered by tarpaulin or other means.				
		<ul> <li>All drainage facilities and erosion and sediment control structures, if any, should be regularly inspected and maintained to ensure proper and efficient operation at all times and particularly following rainstorms. Deposited silt and grit should be removed regularly and disposed of by spreading evenly over stable, vegetated areas.</li> </ul>				
		<ul> <li>All open stockpiles of construction materials (for example, aggregates, sand and fill material) should be covered with tarpaulin or similar fabric during rainstorms. Measures should be taken to prevent the washing away of construction materials, soil, silt or debris into any drainage system.</li> </ul>				
		<ul> <li>Manholes (including newly constructed ones) should always be adequately covered and temporarily sealed so as to prevent silt, construction materials or debris being washed into the drainage system and storm runoff being directed into foul sewers.</li> </ul>				
		• Precautions to be taken at any time of year when rainstorms are likely, actions to be taken when a rainstorm is imminent or forecasted, and actions to be taken during or after rainstorms are summarized in Appendix A2 of ProPECC PN 1/94. Particular attention should be paid to the control of silty surface runoff during storm events.				
		<ul> <li>All vehicles and plant should be cleaned before leaving a construction site to ensure no earth, mud, debris and the like is deposited by them on roads. An adequately designed and sited wheel washing</li> </ul>				



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		facilities should be provided at every construction site exit where practicable. Wash-water should have sand and silt settled out and removed at least on a weekly basis to ensure the continued efficiency of the process. The section of access road leading to, and exiting from, the wheel-wash bay to the public road should be paved with sufficient backfall toward the wheel-wash bay to prevent vehicle tracking of soil and silty water to public roads and drains.				
		<ul> <li>Oil interceptors should be provided in the drainage system downstream of any oil/fuel pollution sources as far as possible. The oil interceptors, if any, should be emptied and cleaned regularly to prevent the release of oil and grease into the storm water drainage system after accidental spillage.</li> </ul>				
		<ul> <li>Construction solid waste, debris and rubbish on site should be collected, handled and disposed of properly to avoid water quality impacts.</li> </ul>				
		<ul> <li>All fuel tanks and storage areas should be provided with locks and sited on sealed areas, within bunds of a capacity equal to 110% of the storage capacity of the largest tank to prevent spilled fuel oils from reaching water sensitive receivers nearby.</li> </ul>				
S.6.7.5	S.6.2.3 & Table A1-4 of Appendix 1	Maintenance of vehicles and equipment involving activities with potential for leakage and spillage is expected to be carried out off-site and should only be undertaken within areas appropriately equipped to control these discharges.	To control the effluent discharge during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO
S.6.7.6	S.6.2.3 & Table A1-4 of Appendix 1	Contractor shall apply for a discharge license under WPCO.	To control the effluent discharge during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO



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S.6.7.7 & S.6.7.8	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>Sewage from Workforce</li> <li>Portable chemical toilets and/or sewage holding tanks should be provided for handling the construction sewage generated by the workforce. A licensed contractor should be employed to provide appropriate and adequate portable toilets to cater 0.15m<sup>3</sup>/day/employed population and be responsible for appropriate disposal and maintenance.</li> <li>Notices should be posted at conspicuous locations to remind the workers not to discharge any sewage or wastewater into the nearby environment during the construction phase of the Project. Regular environmental audit on the construction site should be conducted in order to provide an effective control of any malpractices and achieve continual improvement of environmental performance on site. It is anticipated that sewage generation during the construction phase of the Project would not cause water quality impact after undertaking all required measures.</li> </ul>	To control sewage generation during construction			WPCO and Waste Disposal Ordinance
S.6.7.10 - S.6.7.15	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>Widening of Drainage Channels</li> <li>Due to the characteristics of narrow width and small water flow of the existing channel, the excavation should be carried out in dry condition (even in wet season) by diverting the stream flow from upstream by a temporary drainage channel with a temporary sheet piles, earth bund or barrier; so, that the works area will remain dry for later excavation and widening works.</li> <li>The temporary drainage channel would be backfilled when the construction works are completed or the temporary diversion is no longer required. Although flooding of the proposed contaminant section seldom</li> </ul>	Water Quality Control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO

## **ATKINS**



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		occurs in dry season, the excavation would consider to suspend when flood water enters the containment causing leakage of runoffs to stream water.				
		<ul> <li>After dewatering of the streams, the sediments should be allowed to dry before excavation (yet still maintain a moist state to avoid dust nuisance). This will facilitate excavation of the sediments and also minimize the risk of drained water flowing back into watercourses or diversion channels as the sediment is handled. Where time or weather constraints require handling of wet sediment, care should be taken in the removal of sediment and the storage area should be bunded to prevent silty runoff entering watercourses. Given its small quantity, all excavated sediment should be reused on-site as backfilling material.</li> <li>To further minimize the leakage and loss of sediments during excavation, tightly sealed closed grab excavators should be employed in river</li> </ul>				
		sections where material to be handled is wet. Where material is dry and in non-river sections, conventional excavations can be used.				
		<ul> <li>Excavated sediment will likely be temporarily stored on-site for reuse as backfilling material. This should be stored in a bunded area and covered at any time to avoid inadvertent release of silts and suspended solids to nearby water bodies.</li> </ul>				
		• Regular monitoring of suspended solids, pH and turbidity should be conducted during excavation works. Any exceedance of water quality in the nearby water bodies caused by inadvertent release of site runoff should be rectified in accordance with EM&A programme for this Project.				



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
S.6.7.16	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>Cast in-situ Construction</li> <li>Minimise the area of the site which generates contaminated stormwater runoff.</li> <li>Provide a separate dedicated drainage system to discharge clean stormwater from the site.</li> <li>Drain all contaminated stormwater and process wastewater to a collection pit for recycling.</li> <li>Regularly clean out solids that accumulate in the pit.</li> <li>There must be no dry weather wastewater discharges from the site.</li> <li>Monitor wet weather discharges for pH and suspended solids. Retain the records.</li> </ul>	Water Quality Control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO
S.6.7.17	S.6.2.3 & Table A1-4 of Appendix 1	Registration to EPD as a CWP (Chemical Waste Producers) is required if chemical wastes are generated and need to be disposed of. Disposal of chemical wastes should be carried out in compliance with the Waste Disposal Ordinance (WDO). The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes published under the WDO should be used as a guideline for handing chemical wastes	Water Quality Control during construction	Contractor(s)	At all construction areas of the site during the entire construction period	WPCO, WDO and the The Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes Chemical Wastes,
S.6.7.18	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>Mitigation measures to avoid potential impact to Cheung Po EIS</li> <li>The construction work in Tai Wo should be scheduled in the dry season and sand bags or other similar facilities should be placed along the southern boundary to the work site to prevent any accidental discharge of untreated effluent into the buffered grassland and EIS under adverse weather condition;</li> <li>Discharge of any treated or untreated effluent, either by means of soakaway or direct discharge to nearby waterways, should be directed away from the</li> </ul>	Water Quality Control during construction	Contractor(s)	At Tai Wo Area during the entire construction period	WPCO



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location / Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		grassland buffer and the EIS.				
Operation	nal Phase					
S.6.7.19 to S.6.7.20 9	S.6.2.3 & Table A1-4 of Appendix 1	<ul> <li>Maintenance of the drainage should be programmed to annual silt removal when the accumulated silt will adversely affect the hydraulic capacity of the channel (except during emergency situations where flooding risk is imminent). Desilting should be carried out by hand or light machinery during the dry season (October to March) when water flow is low;</li> <li>Containment structures (such as sand bags barrier) should be provided for the active desilting works area to facilitate a dry or at least confined working area within the watercourses;</li> <li>Where no maintenance access is available for the channel, temporary access to the works site should be carefully planned and located to minimize disturbance caused to the watercourse, adjacent vegetation and nearby sensitive receivers;</li> <li>The use of lesser or smaller construction plants should be considered to reduce disturbance to the channel bed where fish habitats are located and to the nearby sensitive receivers; and</li> <li>The use of concrete or the like should be avoided or minimized.</li> </ul>	Maintenance desilting works	Project proponent	N/A	N/A

#### Table A1-5 Waste Management Implication – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?					
Constructio	Construction Phase										
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>An on-site environmental co-ordinator employed by the contractor should be identified prior to the outset of the work. Prior to commencement of Project, the environmental coordinator shall prepare a WMP in accordance with the requirements set out in the ETWB TCW No. 19/2005, Waste Management on Construction Sites, for the Engineers Representative's approval. The WMP shall include monthly and yearly Waste Flow Tables (WFT) that indicate the amounts of waste generated, recycled and disposed of (including final disposal location), and which should be regularly updated;</li> </ul>	Waste management during construction	Contractor(s)	Prior to commencement of Project works and implemented throughout the entire construction period	ETWB TCW No. 19/2005					
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>The Project contractor's waste management practices and effectiveness should also be audited by the Engineer on a regular basis;</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005					
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>The reuse/recycling of all materials on site should be investigated and exhausted prior to treatment/disposal off-site;</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005					
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>Good site practices should be adopted from the commencement of works to avoid the generation of waste, reduce cross contamination of waste and to promote waste minimisation;</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	ETWB TCW No. 19/2005					
S.7.5.1	S.7.2.5 and Table A1-5 of	• All waste materials should be sorted on-site into inert and non-inert C&D materials, and where the	Waste management during construction	Contractor(s)	At all construction areas of the site during the	Waste Disposal Ordinance					



EIA Ref.	EM&A Ref.	Re	ecommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
	Appendix 1		materials can be recycled or reused, they should be further segregated. Inert material, or public fill will comprise stone, rock, masonry, brick, concrete and soil which is suitable for land reclamation and site formation whilst non-inert materials include all other wastes generated from the construction process such as plastic packaging and vegetation;			entire construction period	
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	•	The Project contractor should be responsible for identifying what materials can be recycled / reused, whether on-site or off-site. In the event of the latter, the contractor should make arrangements for the collection of the recyclable materials. Any remaining non-inert waste should be collected and disposed of to the landfill as last resort whilst any inert C&D materials should be re-used on site as far as possible. Alternatively, if no use of the inert materials can be found on- site, the materials can be delivered to a Public Fill Area or Public Fill Bank after obtaining the appropriate licence;	Waste management during construction	Constructor(s)	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	•	In order to monitor the disposal of C&D materials and solid waste at public filling facilities and landfills, and to control fly-tipping, a trip ticket system shall be implemented by the contractor, in accordance with the contract and the requirements of DEVB TCW No. 6/2010 "Trip Ticket System for Disposal of Construction and Demolition Material".	Waste management during construction	Constructor(s)	At all construction areas of the site during the entire construction period	DEVB TCW No. 6/2010
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	•	Under the Waste Disposal (Chemical Waste) (General) Regulation, the Project contractor shall register as a Chemical Waste Producer (CWP) if chemical wastes such as spent lubricants,	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal (Chemical Waste) (General) Regulation



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		paints, etc. are generated onsite. Only licensed chemical waste collectors shall be employed to collect any chemical waste generated onsite. The handling, storage, transportation and disposal of chemical wastes shall be conducted in accordance with the Code of Practice on the Packaging, Labelling and Storage of Chemical Wastes and A Guide to the Chemical Waste Control Scheme both published by the EPD;			period	



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>A sufficient number of covered bins should be provided onsite for the containment of general refuse to prevent visual impacts and nuisance to the sensitive surroundings. These bins should be cleared daily and the collected waste disposed of to the nearest refuse transfer station. Further to the issue of ETWB TCW No. 8/2010, Enhanced Specification for Site Cleanliness and Tidiness, the contractor is required to maintain a clean and hygienic site throughout the Project works;</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction period	Waste Disposal Ordinance and ETWB TCW No. 8/2010
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>Minimize windblown litter and dust during transportation by either fitting trucks with mechanical covers or transporting waste in enclosed containers.</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>All chemical toilets, if any, should be regularly cleaned and the night-soil collected and transported by a licensed contractor to a Government Sewage Treatment Works facility for disposal;</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>Toolbox talks should be provided to workers about the concepts of site cleanliness and appropriate waste management procedures, including waste reduction, reuse and recycling; and</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance
S.7.5.1	S.7.2.5 and Table A1-5 of Appendix 1	<ul> <li>The Project contractor shall comply with all relevant statutory requirements and Guidelines and their updated versions that may be issued during the course of the Project construction.</li> </ul>	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	Waste Disposal Ordinance
S.7.5.2	S.7.2.5 and Table A1-5 of Appendix 1	Waste reduction is the best achieved at the planning and design stage, as well as by ensuring the implementation of good site practices.	Waste management during construction	Contractor(s)	At all construction areas of the site during the entire construction	ETWB TCW No. 19/2005



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		<ul> <li>Segregation and storage different types of waste in different containers, skips or stockpiles to enhance reuse or recycling of materials and their proper disposal.</li> </ul>				
		<ul> <li>Encourage collection of aluminium cans, PET bottles and paper by providing separate labelled bins to enable these wastes to be segregated from other general refuse generated by the workforce</li> </ul>				
		<ul> <li>Use of reusable non-timber formwork to reduce the amount of C&amp;D material.</li> </ul>				
		<ul> <li>Prior to disposal of C&amp;D waste, it is recommended that wood, steel and other metal shall be separated for re-used and/or recycling to minimise the quantity of waste to be disposal of to landfill.</li> </ul>				
		<ul> <li>Proper storage and site practice to minimise the potential for damage a contamination of construction materials.</li> </ul>				
		<ul> <li>Plan and stock construction materials carefully to minimise amount of waste generated and avoid unnecessary generation of waste.</li> </ul>				
Operationa	l Phase					
N/A	N/A	None specific	N/A	N/A	N/A	N/A



Table A1-6	Land Contamination	<ul> <li>Implementation</li> </ul>	Schedule of Recom	mended Mitigation Measures
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EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Construction	n Phase					
S.8.8.1	S.8.2.1 & Table A1-6 of Appendix 1	<ul> <li>Unexpected contaminated materials may be encountered near identified potential contaminated sites during construction. Should suspected contamination be found during construction, the extent and nature of contamination within Project areas should be properly assessed and the contaminated soil/groundwater should be remediated in accordance with EPD issued publications as below:</li> <li>Guidance Note for Contaminated Land Assessment and Remediation;</li> <li>Guidance Manual for Use of Risk-based Remediation Goals ("RBRGs") for Contaminated Land Management; and</li> <li>Practice Guide for Investigation and Remediation of Contaminated Land</li> </ul>	Safety precautionary measures for handling possible contaminated materials	Contractor(s)	During construction works within the works areas nearby the land contamination sites HC- A, HC-C, HC-D, HC-I, LFT-A, LFT-B, LFT-C, LFT-D, LFT-E and SSNV-A	Guidance Note for Contaminated Land Assessment and Practice Guide for Investigation Remediation of Contaminated Land
Operational	Phase					
N/A	N/A	None specific	N/A	N/A	N/A	N/A



 Table A1-7
 Landscape & Visual Impact – Implementation Schedule of Recommended Mitigation Measures

EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
Constructio	n Phase					
S9.12.1.1	S.9.2	Construction Site Control CM01 - Tree Protection and Preservation Trees / woodland within the Project Site which are unaffected by the works shall be protected and preserved during the construction phase. The tree preservation proposals shall be coordinated with the layout and design of the engineering and architectural works at detailed design stage for further retention of individual trees	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM02 – Compensatory Tree Planting If removal of trees unavoidable due to construction impacts, trees will be compensated where technically feasible.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM03 - Works Area and Temporary Works Areas (Good Site Practice) The construction sequence and construction programme shall be optimized in order to minimize the duration of impact. Construction site controls shall be enforced including the storage of materials, and the location and appearance of site accommodation and site storage. The site office or temporary above-ground structures shall be sited in locations which are not visually prominent.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM04 - Advance Implementation of Mitigation Planting Replanting of existing / disturbed vegetation shall be undertaken as soon as technically feasible.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM05 - Coordination with Concurrent Projects Coordinated implementation programme with concurrent projects to minimise impacts and where possible reduce	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		the period of disturbance.				
S9.12.1.1	S.9.2	CM06 - Decorative Screen Hoarding Decorative screen hoarding will be erected along areas of the construction works site boundary where the works site borders publically accessible routes and/or is close to visually sensitive receivers (VSRs) to screen undesirable views of the works site. It is proposed that the screening be compatible with the surrounding environment and where possible, non-reflective, recessive colours be used.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM07 – Light Control Construction and night time lighting glare will be controlled to minimize glare impact to adjacent VSRs during the construction stage. This is considered a general measure for good practice.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM08 – Topsoil reuse Excavated topsoil should be conserved for re-use by the Project or other projects. This is considered a general measure for good site practice.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
S9.12.1.1	S.9.2	CM09 - Channel Bed Translocation Excavated natural stream bedding should be conserved for re-use by the Project. This is considered a general measure for promoting sustainability and ecological continuity.	Good site practices and to minimize landscape and visual impact	DSD and its contractors.	Work Sites	EIAO-TM
Operational	Phase					
S.12.1.2 of Appendix 9-1	S.9.2	Design and Construction of the Works, including Hard work and Soft work OM01- Detailed Design Considerations Detailed design of development components should	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		reduce landscape footprint and visibility of structures. The area allowed for necessary structures should be reduced to a practical minimum.				
S.12.1.2 of Appendix 9-1	S.9.2	OM02 - Aesthetically Pleasing Design The form, textures, finishes and colours of the proposed development components should be compatible with the existing surroundings. Light earthy tone colours such as shades of green, shades of grey, shades of brown and off- white may be utilised where technically feasible to reduce the visibility of the development components, including all roadwork, buildings and noise barriers etc. To further improve visual amenity, natural building materials such as stone and timber, should be preferably adopted for architectural features, where technically feasible.	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM
S.12.1.2 of Appendix 9-1	S.9.2	OM03 – Responsive Design of Channel alignments The proposed use of a responsive design for the disposition of the main elements of the proposed drainage scheme including the routing of the channel to enable the preservation of significant landscape elements, such as large trees and the development of aesthetic treatments in response to the urban context within which the projects are to be implemented. The disposition and height profile of the developments and above ground utilities structures to respond to the existing context particularly the existing landform and preserved trees. Proposals designed to minimise the single use of space for functional and utility purposes and promote integrated design solutions. Create a subtle transition at the edges of the sites to enhance the sense of visual integration with the existing context and avoid abrupt transitions between the existing and proposed	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		built environment.				
S.12.1.2 of Appendix 9-1	S.9.2	OM04 – Design of Engineering Structures The design of the proposed Engineering Structures such as the proposed retaining culverts and footbridges should pay particular attention to the appearance and construction methods. The detailed design landscape consultants shall work in unison with the engineers on the aesthetic aspects of the structures and their relationship with the landscape. Planting would be used wherever possible to minimise the apparent height of structures and to soften their appearance in medium and long distance views. The design of engineering structures shall avoid any unnecessary visual clutter; this would be achieved through the co-ordination of the various engineering disciplines involved to arrive at integrated design solutions.	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM
S.12.1.2 of Appendix 9-1	S.9.2	OM05 – Design of Retaining Walls and Channel Embankments The proposed treatment of Retaining Wall and Slopes will be undertaken in accordance with GEO Publication No. 1/2000 "Technical Guidelines on Landscape Treatment and Bio-engineering for Man-made Slopes and Retaining Walls" as well as DSD Practice Note No. 1/2015 Guidelines on Environmental and Ecological Considerations for River Channel Design. These engineering structures will be aesthetically enhanced through the use of soft landscape works including tree and shrub planting to give man-made slopes a more natural appearance blending into the local rural landscape. Whip sized tree planting is preferred on the face of soil cut slopes. The smaller, younger plant stock will adapt to their new growing conditions more quickly than larger sized stock and establish a naturalistic effect	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM

# **ATKINS**



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		more rapidly. Larger sized tree stock shall be missed with whip sized trees to create a more diverse woodland structure enhance the screening effect from day one. Hydroseeding will be applied on slope has a gradient more than 30 degree.				
S.12.1.2 of Appendix 9-1	S.9.2	OM06 – Compensatory Planting Proposals at Channel edges All compensatory planting of trees is to be carried out in accordance with ETWB TCW No. 10/2013. A total woodland compensation area of 5.54 ha is proposed. The planting proposals will utilise native species. Some compensatory shrub and ground cover planting will also be provided within the channel edge area to create more structurally diverse woodland and a layered vegetated edge to the watercourse.	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM
S.12.1.2 of Appendix 9-1	S.9.2	OM07 – Channel bed and embankment toe greening Develop practical greening and ecological enhancements in accordance with DSD Practice Note No. 1/2015 Guidelines on Environmental and Ecological Considerations for River Channel Design.	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM
S.12.1.2 of Appendix 9-1	S.9.2	OM08 – Vertical and trailing Greening Vertical planting should be established to soften the hard, vertical surfaces of the proposed development components. These components will include walls of the proposed culvert sand retaining walls. Planting to utilise climbing and trailing plants. Location and extent of vertical greening subject to detailed design.	To minimize landscape and visual impact	DSD and its management and maintenance agents	Work Sites	EIAO-TM
S.12.1.2 of Appendix 9-1	S.9.2	OM09 – Green Paving Where technically feasible utilise a green paving approach such as grass-crete or grass-grid to maximise the area of planting and reduce the area of hard paving.	To minimize landscape and visual impact	DSD and its management and maintenance	Work Sites	EIAO-TM



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		Location and extent of green paving subject to detailed design.		agents		



Table A1-8	Cultural Heritage Impact – Implementation Schedule of Recommended Mitigation Measures
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Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
<ul> <li>Lee Tat Bridge (GB-01)</li> <li>A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures;</li> <li>Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings should be included in the condition survey report. The location of any monitoring equipment in the building must be approved by the owner before installation;</li> <li>A buffer zone should be provided to separate the building or walls of the building from the construction works. The buffer zone should be clearly marked out by temporary fencing. The buffer zone should be made at least 5m from the proposed works or if this is not possible as large as the site restrictions allow;</li> </ul>	Cultural heritage protection	Contractors	During the construction period, for Lee Tat Bridge (GB-01)	AMO Guidelines on CHIA; TM-EIAO
L	<ul> <li>Mitigation Measures</li> <li>Lee Tat Bridge (GB-01)</li> <li>A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures;</li> <li>Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings should be adopted. A monitoring schedule, the location of monitoring equipment, the frequency of monitoring, reporting requirements and action plan should be included in the condition survey report. The location of any monitoring equipment in the building must be approved by the owner before installation;</li> <li>A buffer zone should be provided to separate the building or walls of the building from the construction works. The buffer zone should be clearly marked out by temporary fencing. The buffer zone should be made at least 5m from the proposed works or if this is not possible as large as the site restrictions allow;</li> </ul>	<ul> <li>Recommended Environmental Protection Measures/ Mitigation Measures</li> <li>recommended measures &amp; main concerns to address</li> <li>ee Tat Bridge (GB-01)</li> <li>A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures;</li> <li>Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings should be adopted. A monitoring schedule, the location of monitoring equipment, the frequency of monitoring, reporting requirements and action plan should be included in the condition survey report. The location of any monitoring equipment in the building must be approved by the owner before installation;</li> <li>A buffer zone should be provided to separate the building or walls of the building from the construction works or if this is not possible as large as the site restrictions allow;</li> <li>The contractor should ensure that safe public access</li> </ul>	Recommended Environmental Protection Measures/ Mitigation Measures       Objectives of the recommended measures & main concerns to address       implement the measures?         cee Tat Bridge (GB-01)       A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures;       Cultural heritage protection       Contractors         Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic buildings should be adopted. A monitoring schedule, the location of monitoring equipment, the frequency of monitoring, reporting requirements and action plan should be included in the condition survey report. The location of any monitoring equipment in the building must be approved by the owner before installation;       A buffer zone should be provided to separate the building or walls of the building from the construction works. The buffer zone should be clearly marked out by temporary fencing. The buffer zone should be made at least 5m from the proposed works or if this is not possible as large as the site restrictions allow;       Image: Support Suport Support Support Support Support Support	Recommended Environmental Protection Measures/ Mitigation Measures       Upicetives of the recommended measures & main concerns to address       implement the measures?         Location / Timing of Measures       Cultural heritage protection       Contractors         e Tat Bridge (GB-01)       Cultural heritage protection       Contractors         A condition survey will be carried out in advance of works that may be affected by ground-borne vibration. The Condition Survey Report should contain descriptions of the structure, identification of fragile elements, an appraisal of the condition and working methods for any proposed monitoring and precautionary measures that are recommended with aid of photo records. The condition survey report must be submitted to AMO for comment before construction activities commence. The contractor should implement the approved monitoring and precautionary measures;       Cultural heritage protection       Contractors         Vibration monitoring should be undertaken during the construction works to ensure that safe levels of vibration are not exceeded. An Alert, Alarm and Action (AAA) vibration limit set at 5 / 6 / 7.5 mm/s for Grade 3 historic building should be included in the condition survey report. The location of any monitoring sequipment in the building must be approved by the owner before installation;       A buffer zone should be provided to separate the building or walls of the building from the construction works. The builfer zone should be clearly marked out by temporary fencing. The buffer zone should be made at least 5m from the proposed works or if this is not possible as large as the site restrictions allow;       The contractor should ensure that safe public access



EIA Ref.	EM&A Ref.	Recommended Environmental Protection Measures/ Mitigation Measures	Objectives of the recommended measures & main concerns to address	Who to implement the measures?	Location/ Timing of implementation of Measures	What requirements or standards for the measures to achieve?
		separated from the construction works areas is provided for any such affected cultural heritage structure. It is recommended that safe public access to the bridge be provided during the construction works.				
Table 10-3	Table 10.1	Lan Fong Study Hall (GB-02) <ul> <li>No mitigation required</li> </ul>	N/A	N/A	N/A	AMO Guidelines on CHIA; TM-EIAO
Table 10-3	Table 10.1	St. John's Chapel (GB-03) <ul> <li>No mitigation required</li> </ul>	N/A	N/A	N/A	AMO Guidelines on CHIA; TM-EIAO
Table 10-1	10.2.1-2	<ul> <li>The proposed drainage works in the Lin Fa Tei area near previous wooden archaeological remains.</li> <li>Archaeological Survey prior to construction works in area marked on Figure 10.16 of EIA report</li> <li>A qualified archaeologist shall apply for a licence under the Antiquities and Monuments Ordinance (Cap. 53) for the archaeological fieldwork</li> </ul>	Identification of archaeological remains, deposits and material within survey area Identification of archaeological extent	Qualified archaeologist engaged by Contractor	Prior to construction phase	Antiquities and Monuments Ordinance
Table 10-1	10.2.3	As a precautionary measure, the Antiquities and Monuments Office (AMO) should be informed immediately in case of discovery of antiquities or supposed antiquities in the course of excavation for the proposed drainage improvement works at Tai Wo area, Ha Che River area, Lin Fa Tei area (all areas except area identified for Archaeological Survey) and Sung Shan New village area, so that appropriate mitigation measures, if needed, can be timely formulated and implemented in agreement with AMO.	To ensure appropriate mitigation measures can be timely formulated and implemented to preserve archaeological data, if discovered, in agreement with AMO	Contractor	During construction phase	Antiquities and Monuments Ordinance
Operational Phase						
N/A	N/A	None specific	N/A	N/A	N/A	N/A